

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,110,444 B1  
APPLICATION NO. : 09/632856  
DATED : September 19, 2006  
INVENTOR(S) : Sorrells et al.

Page 1 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

ON TITLE PAGE

Item (56)

Under "U.S. Patent Documents", please insert the following citations:

|           |         |                     |
|-----------|---------|---------------------|
| 4,870,659 | 09/1989 | Oishi et al.        |
| 4,871,987 | 10/1989 | Kawase              |
| 4,885,587 | 12/1989 | Wiegand et al.      |
| 4,885,756 | 12/1989 | Fontanes et al.     |
| 4,888,557 | 12/1989 | Puckette, IV et al. |
| 4,890,302 | 12/1989 | Muilwijk            |
| 4,893,316 | 01/1990 | Janc et al.         |
| 4,893,341 | 01/1990 | Gehring             |
| 4,894,766 | 01/1990 | De Agro             |
| 4,896,152 | 01/1990 | Tiemann             |
| 4,902,979 | 02/1990 | Puckette, IV        |
| 4,908,579 | 03/1990 | Tawfik et al.       |
| 4,910,752 | 03/1990 | Yester, Jr. et al.  |
| 4,914,405 | 04/1990 | Wells               |
| 4,920,510 | 04/1990 | Senderowicz et al.  |
| 4,922,452 | 05/1990 | Larsen et al.       |
| 4,931,921 | 06/1990 | Anderson            |
| 4,944,025 | 07/1990 | Gehring et al.      |
| 4,955,079 | 09/1990 | Connerney et al.    |
| 4,965,467 | 10/1990 | Bilteijst           |
| 4,967,160 | 10/1990 | Quievy et al.       |
| 4,970,703 | 11/1990 | Hariharan et al.    |
| 4,982,353 | 01/1991 | Jacob et al.        |
| 4,984,077 | 01/1991 | Uchida              |
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| 5,003,621 | 03/1991 | Gailus              |
| 5,005,169 | 04/1991 | Bronder et al.      |
| 5,006,810 | 04/1991 | Popescu             |
| 5,010,585 | 04/1991 | Garcia              |
| 5,014,304 | 05/1991 | Nicollini et al.    |
| 5,015,963 | 05/1991 | Sutton              |
| 5,017,924 | 05/1991 | Guiberteau et al.   |
| 5,020,149 | 05/1991 | Hemmie              |
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| 5,052,050 | 09/1991 | Collier et al.      |
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Item (56)

Under "Foreign Patent Documents", please insert the following citations:

|                    |         |
|--------------------|---------|
| JP 6-237276        | 08/1994 |
| JP 8-23359         | 01/1996 |
| JP 47-2314         | 02/1972 |
| JP 58-7903         | 01/1983 |
| JP 58-133004       | 08/1983 |
| JP 60-58705        | 04/1985 |
| JP 4-123614        | 04/1992 |
| JP 4-127601        | 04/1992 |
| JP 5-175730        | 07/1993 |
| JP 5-175734        | 07/1993 |
| JP 7-154344        | 06/1995 |
| JP 7-307620        | 11/1995 |
| JP 55-66057        | 05/1980 |
| JP 63-65587        | 03/1988 |
| JP 63-153691       | 06/1988 |
| EP 0 276 130 A2&A3 | 07/1988 |

Under "Other Publications", please insert the following citations:

Karasawa, Y. *et al.*, "A New Prediction Method for Tropospheric Scintillation on Earth-Space Paths," *IEEE Transactions on Antennas and Propagation*, IEEE Antennas and Propagation Society, Vol. 36, No. 11, pp. 1608-1614 (November 1988).

Kirsten, J. and Fleming, J., "Undersampling reduces data-acquisition costs for select applications," *EDN*, Cahners Publishing, Vol. 35, No. 13, pp. 217-222, 224, 226-228 (June 21, 1990).

Lam, W.K. *et al.*, "Measurement of the Phase Noise Characteristics of an Unlocked Communications Channel Identifier," *Proceedings Of the 1993 IEEE International Frequency Control Symposium*, IEEE, pp. 283-288 (June 2-4, 1993).

Lam, W.K. *et al.*, "Wideband sounding of 11.6 Ghz transhorizon channel," *Electronics Letters*, IEE, Vol. 30, No. 9, pp. 738-739 (April 28, 1994).

Larkin, K.G., "Efficient demodulator for bandpass sampled AM signals," *Electronics Letters*, IEE, Vol. 32, No. 2, pp. 101-102 (January 18, 1996).

Lau, W.H. *et al.*, "Analysis of the Time Variant Structure of Microwave Line-of-sight Multipath Phenomena," *IEEE Global Telecommunications Conference & Exhibition*, IEEE, pp. 1707-1711 (November 28 - December 1, 1988).

Lau, W.H. *et al.*, "Improved Prony Algorithm to Identify Multipath Components," *Electronics Letters*, IEE, Vol. 23, No. 20, pp. 1059-1060 (September 24, 1987).

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Item (56)

Under "Other Publications", please insert the following citations (cont'd):

Lesage, P. and Audoin, C., "Effect of Dead-Time on the Estimation of the Two-Sample Variance," *IEEE Transactions on Instrumentation and Measurement*, IEEE Instrumentation and Measurement Society, Vol. IM-28, No. 1, pp. 6-10 (March 1979).

Liechti, C.A., "Performance of Dual-gate GaAs MESFET's as Gain-Controlled Low-Noise Amplifiers and High-Speed Modulators," *IEEE Transactions on Microwave Theory and Techniques*, IEEE Microwave Theory and Techniques Society, Vol. MTT-23, No. 6, pp. 461-469 (June 1975).

Linnenbrink, T.E. et al., "A One Gigasample Per Second Transient Recorder," *IEEE Transactions on Nuclear Science*, IEEE Nuclear and Plasma Sciences Society, Vol. NS-26, No. 4, pp. 4443-4449 (August 1979).

Liou, M.L., "A Tutorial on Computer-Aided Analysis of Switched-Capacitor Circuits," *Proceedings of the IEEE*, IEEE, Vol. 71, No. 8, pp. 987-1005 (August 1983).

Lo, P. et al., "Coherent Automatic Gain Control," *IEE Colloquium on Phase Locked Techniques*, IEE, pp. 2/1-2/6 (March 26, 1980).

Lo, P. et al., "Computation of Rain Induced Scintillations on Satellite Down-Links at Microwave Frequencies," *Third International Conference on Antennas and Propagation (ICAP 83)*, pp. 127-131 (April 12-15, 1983).

Lo, P.S.L.O. et al., "Observations of Amplitude Scintillations on a Low-Elevation Earth-Space Path," *Electronics Letters*, IEE, Vol. 20, No. 7, pp. 307-308 (March 29, 1984).

Madani, K. and Aithison, C.S., "A 20 Ghz Microwave Sampler," *IEEE Transactions on Microwave Theory and Techniques*, IEEE Microwave Theory and Techniques Society, Vol. 40, No. 10, pp. 1960-1963 (October 1992).

Marsland, R.A. et al., "130 Ghz GaAs monolithic integrated circuit sampling head," *Appl. Phys. Lett.*, American Institute of Physics, Vol. 55, No. 6, pp. 592-594 (August 7, 1989).

Martin, K. and Sedra, A.S., "Switched-Capacitor Building Blocks for Adaptive Systems," *IEEE Transactions on Circuits and Systems*, IEEE Circuits and Systems Society, Vol. CAS-28, No. 6, pp. 576-584 (June 1981).

Marzano, F.S. and d'Auria, G., "Model-based Prediction of Amplitude Scintillation variance due to Clear-Air Tropospheric Turbulence on Earth-Satellite Microwave Links," *IEEE Transactions on Antennas and Propagation*, IEEE Antennas and Propagation Society, Vol. 46, No. 10, pp. 1506-1518 (October 1998).

Matricciani, E., "Prediction of fade durations due to rain in satellite communication systems," *Radio Science*, American Geophysical Union, Vol. 32, No. 3, pp. 935-941 (May-June 1997).

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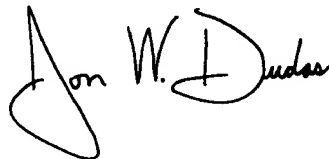
Section (56)

Under "Other Publications", please insert the following citations (cont'd):

McQueen, J.G., "The Monitoring of High-Speed Waveforms," *Electronic Engineering*, Morgan Brothers Limited, Vol. XXIV, No. 296, pp. 436-441 (October 1952).

Signed and Sealed this

Seventh Day of August, 2007

A handwritten signature in black ink, reading "Jon W. Dudas". The signature is stylized, with a large, looped initial "J" and a distinct "D" for "Dudas".

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*